

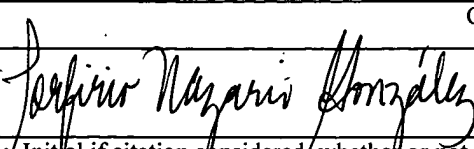
FORM PTO-1449 U.S. Dept. of Commerce Patent and Trademark Office AUG 25 1998 INFORMATION DISCLOSURE STATEMENT (use several sheets if necessary)				ATTORNEY DOCKET NO. 2771-221		SERIAL NO. 09/012,679	
				APPLICANT Gautam Bhandari and Thomas H. Baum			
				FILING DATE 1/23/98		GROUP 1763 1629	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	2,839,421	6/58	Albisetti	106	287.17	PH 2:22 1700
	AB	3,076,834	2/63	Norton	556	175-X	
	AC	5,204,314	4/93	Kirlin, et al.	505	001	
	AD	5,711,816	1/98	Kirlin, et al.	118	726	
	AE	3,437,516	1969	C. Tamborski	117	107.2	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AF	GB 976,573	1964 Nov. 23, 1964	Britain	—	—	
	AG	DE3447635A1	July 18, 1985	Germany	—	—	Abstract only
OTHER DOCUMENTS (Including Author, Title, Journal-Date, Page Number, Etc.)							
	AH	Yu. E. Ovchinnikov, et al. "The Crystal Structures of the Titanium-Containing Organosilicon Compounds (SiMe ₃) ₃ and (SiMe ₃) ₃ GeTi(Nme ₂) ₃ " <i>Metalloorg. Khim. (Organometallic Chem. In USSR)</i> , 1992, Vol.5, p. 564.					
	AI	Yu. E. Ovchinnikov Yu. T. Struchkov M. V. Ustinov, M.G. Voronkov, "Crystal and Molecular Structure of Organosilicon Derivatives of Titanium (IV) (Me ₃ Si) ₃ SiTi(Net ₂) ₃ and CiTi[N(SiMe ₃) ₃] ₃ <i>Izu. Akad. Nauk SSSR, Ser. Khim.</i> , 1993, p. 1473.					
	AJ	M.T. Bohr, "Scaling of High Performance Interconnects", <i>Advanced Metallization and Interconnect Systems for ULSI Applications in 1996</i> , MRS Publishers, 1997, p.3.					
	AK	M.B. Small, D. Pearson, "On-Chip Wiring for VLSI Status and Directions", <i>IBM J. Res. Dev.</i> , 1990, Vol. 34, pp. 858-867.					
	AL	S. P. Muraka, R. J. Gutman, A. Kaloyeros and W. A. Lanford, "Advanced Multilayer Metallization Schemes with Copper as Interconnection Metal", <i>Thin Solid Films</i> , 1994, Vol. 236, pp. 257-266					
	AM	K. Holloway, et al., "Tantalum as a Diffusion Barrier Between Copper and Silicon: Failure Mechanism and Effect of Nitrogen Additions," <i>J. Appl. Phys.</i> , 1992 Vol. 71, pp. 5433-5444					
	AN	J.O. Olowolafe, C.J. Mogab, R.B. Gregory and M. Kottke, "Interdiffusions in Cu/Reactive-Ion-Sputtered TiN, Cu/Chemical-Vapor-Deposited TiN, Cu/TaN and TaN/Cu/TaN Thin-Film Structures: Low Temperature Diffusion Analyses", <i>J. Appl. Phys.</i> , 1992, Vol. 72, pp. 4099-4103.					
	AO	E. Kolawa, "Tantalum-Based Diffusion Barriers in Si/Cu VLSI Metallizations", <i>J. Appl. Phys.</i> , 1991, Vol. 70, pp. 1369-1373					
	AP	S.-Q. Wang, et al., "Step Coverage Comparison of Ti/TiN Deposited by Collimated and Uncollimated Physical Vapor Deposition Techniques", <i>J. Vac. Sci. Technol. B</i> , 1996, Vol. 14(3), pp. 1846-1852.					
	AQ	J.C. Fuggle et al, "Reactions of Niobium and Tantalum Pentafluorides with Trimethylsilyldiethylamine and with Trimethylsilyl Chloride", 1972, pp. 1766-1767					
Continue on Page <u>2</u>							
EXAMINER 					DATE CONSIDERED 4/20/99		
EXAMINER: Initial if citation considered whether or not citation is in conformance with MPEP § 609, Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.							

FORM PTO-1449		US Dept. of Commerce Patent and Trademark Office		ATTORNEY DOCKET NO.		SERIAL NO.	
				2771-221		09/012,679	
INFORMATION DISCLOSURE STATEMENT (use several sheets if necessary)				APPLICANT Gautam Bhandari and Thomas H. Baum			
				FILING DATE 1/23/98		GROUP 1763/621	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>[Signature]</i>	AR	5,034,372	7/23/91	Matsuno et al.	505	1	
<i>[Signature]</i>	AS	5,110,622	5/5/92	Hasegawa et al.	427	126.1	
<i>[Signature]</i>	AT	5,120,703	6/9/92	Snyder et al.	505	1	
<i>[Signature]</i>	AU	5,280,012	1/18/94	Kirlin et al.	505	1	
<i>[Signature]</i>	AV	5,376,409	12/27/94	Kaloyeros et al.	427	248.1	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
OTHER DOCUMENTS (Including Author, Title, Journal-Date, Page Number, Etc.)							
<i>[Signature]</i>	(AW)	K. Hieber, "Structural and Electrical Properties of Ta and Ta Nitrides Deposited by Chemical Vapour Deposition", <i>Thin Solid Films</i> , 1974, Vol. 24, pp. 157-164					
<i>[Signature]</i>	(AX)	R. Fix, R. G. Gordon, D.M. Hoffman, "Chemical Vapor Deposition of Vanadium, Niobium, and Tantalum Nitride Thin Films", <i>Chem. Mater.</i> , 1993, Vol. 5, pp. 614-619					
<i>[Signature]</i>	(AY)	D.N. Williams et al, "Half-sandwich Imido Complexes of Niobium and Tantalum", <i>J. Chem. Soc Dalton Trans.</i> , 1992, pp. 739-751					
<i>[Signature]</i>	(AZ)	J. Li, T. E. Seidel, J. W. Mayer, "Copper-Based Metallization in ULSI Structures", <i>MRS Bulletin</i> , 1994, Vol. XIX, No. 8, pp. 15-18.					
<i>[Signature]</i>	(BA)	S.M. Rossangel, et al., "Thin, High Atomic Weight Refractory Film Deposition for Diffusion Barrier, Adhesion Layer, and Seed Layer Applications" <i>J. Vac. Sci. Technol. B</i> , Vol. 14, pp. 1819-1827					
<i>[Signature]</i>	(BB)	D. Ugolini, S.P. Kowalczyk, F.R. McFeely, "Photoelectron Spectroscopy Studies of Chemical Vapor Deposition of Ta from a TaF ₅ Precursor on Si and SiO ₂ Substrates" <i>J. Appl. Phys.</i> , 1991, Vol. 70, p. 3899.					
<i>[Signature]</i>	(BC)	S.J. McLain, et al., "Multiple Metal-Carbon Bonds. The Reaction of Niobium and Tantalum Neopentylidene Complexes with Simple Olefins: A Route to Metallocyclopentanes", <i>J. Amer. Chem. Soc.</i> , 1977, Vol. 99, p. 3519.					
<i>[Signature]</i>	(BD)	R. R. Schrock, "Alkylidene Complexes of Niobium and Tantalum", <i>Acc. Chem. Res.</i> , 1979, Vol. 12, p. 98.					
<i>[Signature]</i>	(BE)	R. R. Schrock, S.M. Rockledge, "Tantalum Complexes Containing Diimido Bridging Dinitrogen Ligands" <i>J. Amer. Chem. Soc.</i> , 1980, Vol. 102, pp. 7809-7811					
<i>[Signature]</i>	(BF)	Yuan-Wei Chao et al, "Preparation and Properties of Amido Halide Complexes of Niobium and Tantalum and Reactions with Alkynes", <i>Polyhedron</i> , 1990, Vol. 9, No. 22, pp. 2709-2716.					
Continue on Page <u>3</u>							
EXAMINER <i>[Signature: Porfirio Nazario Gonzalez]</i>					DATE CONSIDERED <i>4/20/99</i>		
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.							

FORM PTO-1449		US Dept. of Commerce Patent and Trademark Office		ATTORNEY DOCKET NO.		SERIAL NO.	
		AUG 25 1998		2771-221		09/012,679	
INFORMATION DISCLOSURE STATEMENT (use several sheets if necessary)				APPLICANT Gautam Bhandari and Thomas H. Baum			
				FILING DATE 1/23/98		GROUP 1763-1624	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	BG	4,147,556	4/79	Donley	106	287.18	
	BH	4,281,037	7/81	Choung	427	407.3	
	BI	5,412,129	5/2/95	DiCarolus	556	40	6/17/94
	BJ	5,204,314	4/20/93	Kirlin et al.	505	1	
	BK	5,225,561	7/6/93	Kirlin et al.	546	256	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
OTHER DOCUMENTS (Including Author, Title, Journal-Date, Page Number, Etc.)							
	BL	John D. Protasiewicz, "Synthesis and Structural Characterization of Low Valent Group V Phosphine Complexes", <i>Inorg. Chem.</i> , 1992, Vol. 31, pp. 4134-4142.					
	BM	D.C. Bradley et al, "Nuclear Magnetic Resonance Studies on Niobium and Tantalum Penta-alkoxides", <i>J. Chem. Soc. (A)</i> , 1968, pp.219-223					
	BN	M.H. Tsai, S.C. Sun, C.P. Lee, H.T. Chiu, C.E. Tsai, S.H. Chuang, S.C. Wu, "Metal-Organic Chemical Vapor Deposition of Tantalum Nitride Barrier Layers for ULSI Applications", <i>Thin Solid Films</i> , 1995, Vol. 270, pp. 531-536.					
	BO	H.T. Chiu, W.P. Chang, "Effect of Hydrogen on Deposition of Tantalum Nitride Thin Films From Ethylimidotantalum Complex", <i>J. Mater. Sci. Lett.</i> , 1992, Vol. 11, pp. 570-572.					
	BP	K. Sugiyama, et al., "Low Temperature Deposition of Metal Nitrides by Thermal Decomposition of Organometallic Compounds", <i>J. Electrochem. Soc.</i> , 1975, Vol. 122, p. 1545.					
	BQ	M.G. Simmonds, W.L. Gladfelter, "Chemical Vapor Deposition of Aluminum", <i>The Chemistry of Metal CVD</i> , T.T. Kodas, M.J. Hampden-Smith, Eds., VCH, New York, 1994.					
	BR	T.D. Tilley, <i>The Chemistry of Silicon Compounds</i> , S. Patai, Z. Rappoport Eds., Wiley: New York, 1989, Vol. 2. P. 1415					
	BS	Q. Jiang, P.J. Carroll, D. H. Berry, "Synthesis of Mono- and Bis(silyl) Complexes of Tantalum" <i>Organometallics</i> , 1991, Vol. 10, pp. 3648-3655					
	BT	"Diffusion Barriers for GaAs and InP Devices", <i>NASA, Tech Briefs</i> , June 1997, p. 42.					
Continue on Page 4							
EXAMINER <i>Pauline Negarin Grizzle</i>					DATE CONSIDERED <i>4/20/99</i>		
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.							

FORM PTO-1449		US Dept. of Commerce Patent and Trademark Office AUG 25 1998 PATENT & TRADEMARK OFFICE		ATTORNEY DOCKET NO. 2771-221		SERIAL NO. 09/012,679	
INFORMATION DISCLOSURE STATEMENT (use several sheets if necessary)				APPLICANT Gautam Bhandari and Thomas H. Baum			
				FILING DATE 1/23/98		GROUP 1765-1621	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>[initials]</i>	BU	4,401,474	8/83	Donley	106	243	
<i>[initials]</i>	BV	4,726,938	2/88	Rollat, et al.	423	DIG.14	
<i>[initials]</i>	BW	4,898,842	2/90	David	501	12-X	
<i>[initials]</i>	BX	4,908,065	3/90	Tanitsu et al.	106	287.19-X	
<i>[initials]</i>	BY	5,165,960	11/24/92	Platts	427	166	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
OTHER DOCUMENTS (Including Author, Title, Journal-Date, Page Number, Etc.)							
<i>[initials]</i>	BZ	"Adherent and Stable Metallization of CVD Diamond", <i>NASA Tech Briefs</i> , June 1997, pp. 63-64.					
<i>[initials]</i>	CA	M.F. Lappert, et al, <u>Metal and Metalloid Amides</u> , John Wiley and Sons, pp. 470-543.					
<i>[initials]</i>	CE	R.P.M. Werner, A.H. Filbey, S.A. Manastyrsky, "Tetracarbonylcyclopentadienyl Compounds of the Group V Transition Metals", <i>Inorg. Chem.</i> , 1964, Vol. 3, pp. 298-300					
<i>[initials]</i>	CC	Z. Xue, L. Li, L. K. Hoyt, J.B. Diminnie, J.L. Pollitte, "Early Transition Metal Silyl Complexes Free from Anionic Π -Ligands. A new Family of Alkyl, Alkylidene, and Alkylidyne Compounds", <i>J. Am. Chem. Soc.</i> , 1994, Vol. 116, pp. 2169-2170					
<i>[initials]</i>	CD	W.A. Nugent, R.L. Harlow, "Structure and Reactivity in the Group 5B t-Butylimido Complexes (Me_2N) ₃ M=Nbu ⁺ ; X-Ray Crystal and Molecular Structure of N-t-Butylimidotris(dimethylamido)tantalum", <i>J.C.S. Chem. Comm.</i> , 1978, pp. 579-580.					
<i>[initials]</i>	CE	A.A. Finn, L. Brandt, H.D. Kaesz, R.F. Hicks, "Chemical Vapor Deposition of Platinum, Palladium and Nickel", <i>The Chemistry of Metal CVD</i> , T.T. Kodas, M.J. Hampden-Smith, Eds., VCH, New York, 1994.					
<i>[initials]</i>	CF	Pradeep P. Phule, "Sol-gel Synthesis of Ferroelectric Lithium Tantalate Ceramics: FTIR Investigation of the Molecular Modification of Tantalum Ethoxide", <i>J. Mater. Res.</i> , 1993, Vol.8, No. 2, pp. 334-338					
<i>[initials]</i>	CG	P.N. Kapoor et al, "Organic Compounds of Niobium and tantalum IV Reactions of Niobium and Tantalum Pentaethoxides with B-Diketones", <i>J. of the Less- Common Metals</i> , 1965, Vol. 8., pp. 339-346					
<i>[initials]</i>	CH	R.L. Deutsher, et al, "Eight Coordinate Tetrakis-Chelate Complexes of Niobium(IV) and Tantalum(V)", <i>Inorganica Chimica Acta</i> , 1970, pp. 645-650					
Continue on Page 5							
EXAMINER <i>Porfirio Nazario Gonzalez</i>					DATE CONSIDERED <i>4/30/99</i>		
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.							

FORM PTO-1449		U.S. Dept. of Commerce Patent and Trademark Office AUG 25 1998 OFFICE OF THE COMMISSIONER OF PATENTS & TRADEMARKS		ATTORNEY DOCKET NO. 2771-221		SERIAL NO. 09/012,679	
INFORMATION DISCLOSURE STATEMENT (use several sheets if necessary)				APPLICANT Gautam Bhandari and Thomas H. Baum			
				FILING DATE 1/23/98		GROUP 1763 1621	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>[initials]</i>	CI	3,988,332	1977 10/19/76	R. R. Schrock	260	429 R	
<i>[initials]</i>	CJ	4,510,222	4/9/85	Okunaka et al.	430	5	
<i>[initials]</i>	CK	4,529,427	7/16/85	French	65	3.12	
<i>[initials]</i>	CL	5,679,815	10/21/97	Kirlin et al.	556	42	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
OTHER DOCUMENTS (Including Author, Title, Journal-Date, Page Number, Etc.)							
<i>[initials]</i>	CM	R.R. Schrock et al, "Multiple Metal Carbon Bonds. "Preparation and Characterization of Formation of the Tantalum and Niobium Neopentylidene Complexes, M (CH ₂ Cme ₃) ₃ (CHCMe ₃)", J. Amer. Chem. Soc., 1978, Vol. 100:11, pp. 3359-3370.					
<i>[initials]</i>	CN	Mark M. Bonaszak Holl, "Ladder Structure of [(BuCH ₂) ₂ TaN]5·NH ₃ ·2C ₇ H ₈ and Its relationship to Cubic TaN", J. Am. Chem. Soc., 1990, Vol.112, pp. 7989-7994.					
<i>[initials]</i>	CO	Malcolm H. Chisolm, et al, "Chloro(dimethylamido) Compounds of Tantalum(V): Preparations, Properties, and Structures of [Ta(NMe ₂) ₃ Cl ₂], TaCl ₃ (NMe ₂) ₂ (HNMe ₂), Ta(NMe ₂) ₃ Cl ₂ (HNMe ₂), and [TaCl ₂ (NMe ₂) ₂ (HNMe ₂)] ₂ O" <i>Inorganic Chemistry</i> , 1981, Vol. 20, pp. 1859-1865.					
<i>[initials]</i>	CP	H.-K. Shin, et al., "MOCVD of Titanium Nitride from a New Precursor, Ti[N(CH ₃)C ₂ H ₅] ₄ ", <i>Chem. Mater.</i> , 1997, Vol. 9, pp. 76-80.					
<i>[initials]</i>	CO	T. Kee, <i>Coordination Chemistry</i> , 1993, pp. 171-185.					
<i>[initials]</i>	CR	M. Stolz, K. Heiber, "Universal Chemical Vapour Deposition System for Metallurgical Coatings", <i>Thin Solid Films</i> , 1983, Vol. 100, pp. 209-218.					
<i>[initials]</i>	CS	T. Don Tilley, "The Reactivity of Transition Metal-Silicon Compounds", Final Technical Report, Defense Technical Information Center, AD Number A200371, 1988 August 8.					
<i>[initials]</i>	CT	M.H. Tsai, S.C. Sun, C.P. Lee, H.T. Chiu, S.H. Chuang, "Metalorganic Chemical Vapor Deposition of Tungsten Nitride for Advanced Metallization", <i>Appl. Phys. Lett.</i> , 1996, Vol. 68, pp. 1412-1414					
Continue on Page 6							
EXAMINER <i>[Signature: Porfirio Nazario Gonzalez]</i>					DATE CONSIDERED 4/20/99		
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.							

FORM PTO-1449 U.S. Dept. of Commerce Patent and Trademark Office AUG 25 1998 INFORMATION DISCLOSURE STATEMENT (use several sheets if necessary)		ATTORNEY DOCKET NO. 2771-221		SERIAL NO. 09/012,679			
		APPLICANT Gautam Bhandari and Thomas H. Baum					
		FILING DATE 1/23/98		GROUP 1763 / 621			
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
OTHER DOCUMENTS (Including Author, Title, Journal-Date, Page Number, Etc.)							
✍	(C)	M.H. Tsai, S.C. Sun, H.T. Chiu, C.E. Tsai, S.H. Chuang, "Metalorganic Chemical Vapor Deposition of Tantalum Nitride by Tertbutylimidotris(diethylamido)tantalum for Advanced Metallization" <i>Appl. Phys. Lett.</i> , 1995, Vol.67, pp. 1128-1130.					
✍	(CV)	S.C. Sun et al., "Diffusion Barrier Properties of CVD Tantalum Nitride for Aluminum and Copper Interconnections", VMIC Conference, 1995 ISMIC, June 27-29, pp. 157-161.					
✍	(CW)	H.T. Chiu, S. H. Chuang, "Tungsten Nitride Thin Films Prepared by MOCVD", <i>J. Mater. Res.</i> , 1993, Vol.8, pp. 1353-1360.					
✍	(CX)	P. Catania, et al., "Low Resistivity Body-Centered Cubic Tantalum Thin Films as Diffusion Barriers Between Copper and Silicon", <i>J. Vac. Sci. Tech., A</i> , 1992, A10 pp. 3318-3321					
✍	(CY)	E. Blanquet, et al., "Evaluation of LPCVD Me-Si-N (Me=Ta, Ti, W, Re) Diffusion Barriers for Cu Metallizations", <i>Microelectronic Engineering</i> , 1997, Vol. 37, pp. 189-195.					
✍	(CZ)	Y.W. Chao, et al., "Preparation and Properties of Tantalum Imido Complexes and Their Reactions with Alkynes. Coordination Control through Multiple Metal-Ligand Bonding", <i>Inorg. Chem.</i> , 1989, Vol. 28, pp. 3860-3868.					
✍	(DA)	M. M. Banaszak, et al., "Ammonolysis of Tantalum Alkyls: Formation of Cubic TaN and a Trimeric Nitride, [Cp*MeTaN] ₃ ", <i>Inorg. Chem.</i> 1990, Vol. 29, pp. 1518-1526.					
✍	(DB)	Zhang, J. et al., "Single Liquid Source Plasma-Enhanced Metalorganic Chemical Vapor Deposition of High Quality YBa ₂ Cu ₃ O _{7-x} Thin Films", <i>Appl. Phys. Lett.</i> , 1992, Vol. 61, pp. 2884-2886.					
✍	(DC)	Van Buskirk, P.C. et al., "MOCVD Growth of BaTiO ₃ in an 8" Single-Wafer CVD System," <i>Proc. ISAF 92</i> , Eighth Int'l Symp. Appl. Ferroelectrics, Aug. 31-Sept. 2, 1992.					
Continue on Page 7							
EXAMINER						DATE CONSIDERED	
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.							

FORM PTO-1449 U.S. Dept. of Commerce Patent and Trademark Office <div style="text-align: center; border: 1px solid black; border-radius: 50%; padding: 5px; width: fit-content; margin: 10px auto;"> AUG 25 1998 <small>RECEIVED</small> <small>U.S. PATENT & TRADEMARK OFFICE</small> </div> INFORMATION DISCLOSURE STATEMENT (use several sheets if necessary)		ATTORNEY DOCKET NO. 2771-221		SERIAL NO. 09/012,679			
APPLICANT Gautam Bhandari and Thomas H. Baum		FILING DATE 1/23/98		GROUP 1763-1621			
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES <input type="checkbox"/> NO <input type="checkbox"/>
OTHER DOCUMENTS (Including Author, Title, Journal-Date, Page Number, Etc.)							
[Handwritten Mark]	(DD)	Hiskes, R. et al., "Single Source Metalorganic Chemical Vapor Deposition of Low Microwave Surface Resistance YBa ₂ Cu ₃ O ₇ ," Appl. Phys. Lett. 1991, Vol. 59, pp. 606-607.					
[Handwritten Mark]	(DE)	Zhang et al., "Plasma Enhanced Metalorganic Chemical Vapor Deposition of Conductive Oxide Electrodes for Ferroelectric BaTiO ₃ Capacitors." Mater. Res. Soc. Symp. Proc. Vol. 310, pp. 249-254 (1993).					
[Handwritten Mark]	(DF)	Zhang et al., "Metal Organic Chemical Vapor Deposition of LaSrCoO Electrodes for Ferroelectric Capacitors," 6th ISAF Mtg., March, 1994					
[Handwritten Mark]	(DG)	T. Suzuki, "Comparison of CVD TiN, PECVD WN _x and CVD W-Si-N as Upper Electrode Materials for Ta ₂ O ₅ DRAM Capacitors", Advanced Metallization Conference, Sept 28 1997, San Diego.					
[Handwritten Mark]	(DH)	S.Q. Wang, "Barriers Against Copper Diffusion into Silicon and Drift Through Silicon Dioxide", MRS Bulletin, August 1994, pp. 30-40.					
[Handwritten Mark]	(DI)	D.C. Bradley, M.H. Chisholm, "Transition Metal Dialkylamides and Disilylamides", <i>Accounts of Chemical Research</i> , 1976, Vol. 9, pp.273-280.					
[Handwritten Mark]	(DJ)	S.-Q. Wang, et al., "Film Property Comparison of Ti/TiN Deposited by Collimated and Uncollimated Physical Vapor Deposition Techniques", <i>J. Vac. Sci. Technol. B</i> , 1996, Vol. 14(3), pp. 1837-1845					
[Handwritten Mark]	(DK)	F.W. Ainger, et al., "Deposition of Ferroelectric Oxides by MOCVD.", <i>Prog. Crystal Growth Charact.</i> , 1991, Vol. 22, pp. 183-187.					
[Handwritten Mark]	(DL)	Narula, et al., "Preparation and Characterization of Niobium(V) β-Diketonates", <i>Synth. React. Inorg. Met. Org. Chem.</i> , 1983, Vol. 13, pp. 1-19.					
[Handwritten Mark]	(DM)	Narula, et al., "Preparation and Characterization of Tantalum(V) β-Diketonates", <i>Synth. React. Inorg. Met. Org. Chem.</i> , 1983, Vol. 13, pp. 887-898.					
Continue on Page							
EXAMINER <div style="font-family: cursive; font-size: 1.2em; margin-top: 10px;"> Porfirio Nazari Gonzalez </div>					DATE CONSIDERED		
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.							